

REMARKS

In the Office Action mailed April 2, 2002, the Examiner finally rejected claims 18-21 and 24-35 under 35 U.S.C. 102(b) as being anticipated by, or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Carter. And, in section 2 on pages 4-5 of the Office Action, the Examiner finally rejected claims 22 and 23 under 35 U.S.C. 103(a) as being unpatentable over Carter in view of Cerny et al. These rejections are respectfully traversed for the following reasons.

Initially, as expressed in the Response filed February 26, 2002, the purpose of the instant invention is to provide an apparatus that can allow a plurality of reactions to be carried out in parallel within a plurality of sealed chambers at an elevated pressure. For such an apparatus to function it is critical that each individual chamber is isolated from the other chambers, and that each individual chamber has a pressure tight seal. Claim 18 is believed to be representative of such an apparatus.

Claim 18 will be analyzed in view of Carter to demonstrate why the invention as recited in claim 18 is not disclosed or suggested by Carter.

Carter discloses a device for screening crystallization conditions in solution crystal growth. Carter discloses a first embodiment as depicted by Figures 1-2, a variation of the first embodiment as depicted by Figures 3-5, a second embodiment as depicted by Figures 6-8, and a third embodiment as depicted by Figures 9-10. Accordingly, claim 18 will be discussed as it pertains to each of the three embodiments of Carter and the variation of the first embodiment of Carter.

Claim 18 recites a pressure and temperature reactor vessel comprising

a block defining plural openings that are closed at one end of said plural openings and are open at another end of said plural openings...a closure member to seal said plural openings in a pressure tight manner at said another end of said plural openings...and a locking device to force said closure member against said block such that said closure member seals said plural openings in a pressure tight manner at said another end of said plural openings, whereby the sealed plural openings define plural reaction chambers (emphasis added)

Accordingly, claim 18 requires plural openings that are each closed at their respective ends. Such openings are not taught or suggested by Carter in any of the embodiments thereof.

With regard to the first embodiment of Carter, Figures 1 and 2 can arguably be said to disclose a block 12 defining plural openings 13 and 14. End caps 26 and 27 can be said to correspond to closure members and to render the openings 13 and 14 closed at respective ends thereof. Specifically, when end cap 27 is positioned against ledge 19 of the opening 14, opening 14 can be said to be closed or sealed at one end thereof. Similarly, when end cap 26 is positioned against ledge 18 of opening 13, opening 13 can be said to be closed or sealed at one end thereof. And, the threaded engagement of the end cap or closure member 27 with the housing or block 12 can arguably be said to correspond a locking device to force end cap or closure member 27 against the housing or block 12. Similarly, the threaded engagement between end cap or closure member 26 and the housing or block 12 can arguably be said to correspond to a locking device to force the end cap or closure member 26 against the housing or block 12.

However, even when Carter is interpreted in such a manner, claim 18 recites limitations that are not taught or suggested by the embodiment as depicted in Figures 1-2. In this regard, claim 18 recites **a block defining plural openings that are closed at one end of said plural openings and are open at another end of said plural openings**. Thus, claim 18 requires at least two openings that are each closed at the same one end and are each open at the same another end. Such a limitation is not taught or suggested by Carter.

In this regard, because openings 13 and 14 do not each have two common ends with respect to one another, due to the openings being arranged in series and not in parallel, when end cap 27 is positioned against ledge 19 without end cap 26 being positioned against ledge 18, opening 14 is closed at one end and open at another end; however, opening 13 remains open at both of its ends. This is so, because opening 13 remains in fluid communication with opening 14 when the end cap 27 is positioned against the ledge 19. Were the opening 13 closed at one of its end via the end cap 27 being positioned against the ledge 19, then opening 13 would not be in fluid communication with opening 14. Similarly, when end cap 26 is positioned against ledge 18 without end cap 27 being positioned against ledge 19, opening 13 is closed at one end thereof and open at another end thereof; however, because openings 13 and 14 remain in fluid communication with one another, opening 14 remains open at both ends thereof.

Accordingly, when only one of end caps 26 and 27 is positioned against its corresponding ledge 18 and 19, the embodiment as depicted in Figures 1 and 2 of Carter will not disclose a block defining plural openings that are closed at one end of said plural opening at are open at another end of said plural openings as recited in claim 18, and accordingly, for this reason alone claim 18 is not anticipated by the first embodiment of Carter.

Similarly, when one of the end caps 26 and 27 is positioned against its corresponding ledge, and then the other one of end caps 26 and 27 is positioned against its corresponding ledge, this other end cap will not correspond to the claimed "closure member", since this other end cap or closure member will not seal the plural openings in a pressure tight manner at said another end of said plural openings. In this regard, while this other end cap or closure member can arguably be said to seal one of the plural openings in a pressure tight manner at one end of one of the openings 13 or 14, it does not seal both of the plural openings at an end of each of the plural openings as recited in claim 18. This is so, because when both end caps 26 and 27 are positioned against their respective ledges, openings 13 and 14 remain in fluid communication with one another such that neither of openings 13 and 14 are closed at one end thereof by one of the end caps 26 and 27 and sealed at another end thereof by the other of end caps 26 and 27. Specifically, because openings 13 and 14 remain in fluid communication with one another at ends thereof, these ends are not closed nor are they sealed. For this additional reason, claim 18 is not anticipated by the first embodiment of Carter.

For analogous reasons, the threaded connection between the end caps 26 and 27 and the housing or block 12, while arguably being a locking device, is not a locking device to force said closure member against said block such that said closure member seals said plural openings in a pressure tight manner at said another end of said plural openings. Thus, claim 18 is not anticipated by the first embodiment of Carter.

Even if claim 18 is interpreted such that the plural openings are not each required to be closed at the same one end and open at the same another end, then the first embodiment of Carter still does not anticipate this claim. In this regard, in order for Carter to disclose plural openings that are closed at one end of said plural openings and are open at another end of said plural openings, both end caps 26 and 27 would need to be attached to the housing or block 12. This would result in

opening 13 being closed at one end and being open at another end, and opening 14 being closed at one end and open at another end. However, once end caps 26 and 27 are attached to housing or block 12, there is no structure in Carter that corresponds to the claimed **closure member to seal said plural openings in a pressure tight manner at said another end of said plural openings**. That is, openings 13 and 14 remain open at their another ends at all times. Accordingly, regardless of the interpretation given to the limitation in claim 18 of "a block defining plural openings that are closed at one end of said plural openings and are open at another end of said plural openings", the first embodiment of Carter does not anticipate claim 18.

With regard to the variation of the first embodiment as depicted by Figures 3-5, analogous arguments are presented as have been presented above with regard to the first embodiment of Carter. Specifically, because openings 13 and 14 as shown in Figures 3-5 remain in fluid communication with one another this variation does not disclose or suggest **a block defining plural openings that are closed at one end of said plural openings and are open at another end of said plural openings, a closure member to seal said plural openings in a pressure tight manner at said another end of said plural openings, and a locking device to force said closure member against said block such that said closure member seals said plural openings in a pressure tight manner at said another end of said plural openings**. Thus, claim 18 is also not anticipated by the variation of the first embodiment of Carter.

With regard to the second embodiment of Carter as depicted in Figures 6-8, this embodiment is closer to the claimed invention than is the first embodiment of Carter, since the openings 46 and 47 of the second embodiment are not arranged in series and have common ends. However, for reasons analogous to those expressed above with regard to Figures 1 and 2, because the openings or chambers 46 and 47 as shown in Figures 6-8 remain in fluid communication with one another via orifices 51, 52 and channel 53, the embodiment as depicted in Figures 6-8 also cannot reasonably be said to disclose openings that are closed or sealed at both their ends. Accordingly, the "block", "closure member" and "locking device" as recited in claim 18 is not taught or suggested by the second embodiment of Carter. Thus, claim 18 is not anticipated by the second embodiment of Carter as depicted by Figures 6-8.

Furthermore, with regard to this second embodiment, where claim 18 requires a closure member to seal plural openings, the embodiment as depicted in Figures 6-8 discloses a closure member (54 or 65) and 56 for each of the openings. In other words, where claim 18 requires a common closure member for plural openings, the embodiment as depicted in Figures 6-8 discloses a unique closure member for each of openings 46 and 47. For this additional reason, claim 18 is not anticipated by the second embodiment of Carter as depicted by Figures 6-8.

With regard to the third embodiment of Carter as depicted by Figures 9-10, this embodiment is closer to the claimed invention than is the second embodiment of Carter, since this embodiment discloses a common closure member 82 for the plural openings 72 and 73. However, for reasons analogous to those expressed above with regard to the embodiment of Figures 1-2, because openings 72 and 73 remain in fluid communication with one another via orifices 77, 78 and channel 81, this third embodiment cannot reasonably be said to disclose openings that are closed or sealed at both their ends. Accordingly, the "block", "closure member", and "locking device" as recited in claim 18 is not taught or suggested by the third embodiment of Carter. Thus, claim 18 is not anticipated by the third embodiment of Carter as depicted in Figures 9 and 10.

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Cerny et al. does not resolve the above deficiencies of Carter, and accordingly, any combination thereof would not result in the invention as recited in claim 18.

Thus, claim 18 is also not render obvious over a combination of Carter and Cerny et al. Accordingly, claims 18-35 are allowable over Carter and Cerny et al. either taken alone or in combination.

If the Examiner continues to reject claim 18 as being unpatentable over Carter, then the Examiner is respectfully requested to specifically identify the following features therein that correspond to the following limitations of claim 18:

- (i) a block defining a plural openings that are closed at one end of said plural openings and are open at another end of said plural openings,
- (ii) a closure member to seal said plural openings in a pressure tight manner at said another end of said plural openings, and

- (iii) a locking device to force said closure member against said block such that said closure member seals said plural openings in a pressure tight manner **at said another end of said plural openings.**

In view of the above amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and an early Notice of Allowance is earnestly solicited.

If after reviewing this Amendment, the Examiner believes that any issues remain which must be resolved before the application can be passed to issue, the Examiner is invited to contact the Applicants' undersigned representative by telephone to resolve such issues.

Respectfully submitted,

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